Mohamed Ait-Hocine

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EDUCATION

Queen Mary University of London London, UK
BSc Computer Science (Predicted 1st) *2022 – 2025*

EXPERIENCE

Entrepreneurship & Innovation: Web Development Apr. 2023
TheForage, Moreton Bay Regional Council
- Created a credibility boosting website, covering a sense of greater establishment for the company.
- Proposed a visual representation of the website's structure, as well as a user flow diagram to map out how users would navigate through the website.
- Created a webpage using HTML and CSS which lets users submit a form registering interest.

MedTech Hackathon Nov. 2023
Microsoft, Carradale Futures *London, UK*
- Deconstructed a problem brief regarding Electronic Patient Records (EPRs), then assigned tasks to members of a 5-man group, optimizing team efficiency.
- Designed a concept of an 'EPR lite' solution using Figma which addressed fundamental user requirements.
- Conceptualised a working prototype in under 24 hours using PowerApps, showcasing proficiency in low-code development.
- Presented the prototype to judges, articulating the project's objectives and outlining the seamless implementation of the user requirements.

PROJECTS

Blockudoku Puzzle Game | *Java, Swing, Git, IntelliJ* Mar. 2025
- Developed an engaging 2D puzzle game in Java, combining strategic block placement mechanics inspired by Tetris and Sudoku.
- Engineered core game logic, including a robust system for defining and managing various block shapes and their on-screen representation.
- Implemented a `ShapeSet` to provide a diverse collection of unique block patterns, increasing gameplay variety and challenge.
- Designed `Sprite` class to handle piece states (e.g., `IN_PALETTE`, `IN_PLAY`, `PLACED`), pixel-based movement, and a `snap-to-grid` functionality for precise placement on the game board.
- Utilized Java records ('Cell', 'Piece') and nested classes within 'BlockShapes' for efficient data modeling and organized code structure.

Hobbies App Website | *Django, Vue, Bootstrap, Git, VS Code* Jan. 2025
- Developed a full-stack web application enabling users to connect based on shared hobbies.
- Implemented user account creation and management features, storing user details securely in an SQL database.
- Engineered a hobby input system allowing users to list their interests.
- Designed and built a recommendation engine to identify and suggest users with similar hobbies.
- Enabled social interaction through a "friend" system and a feature to view common interests and discover new potential hobbies.
- Utilized Django for robust backend development and Vue.js for a dynamic and responsive frontend user interface.
- Styled the application using Bootstrap for a clean and modern look and feel.

FDM Expenses App | *HTML, CSS, JavaScript, Python, Flask, PostgreSQL, Git* Apr. 2024
- Voted #1 best FDM Expenses project in University
- Designed a prototype mock-up using Figma.
- Implemented the front-end using React.
- Implemented backend using Python (Flask).

TECHNICAL SKILLS

Languages: Java, Python, SQL (Postgres, MySQL), JavaScript, HTML/CSS, Visual Basic
Frameworks: React, Django, JUnit, Vite.js, Vue
Developer Tools: Git, Conda, Docker, VS Code, Visual Studio, IntelliJ, Jupyter Notebooks